

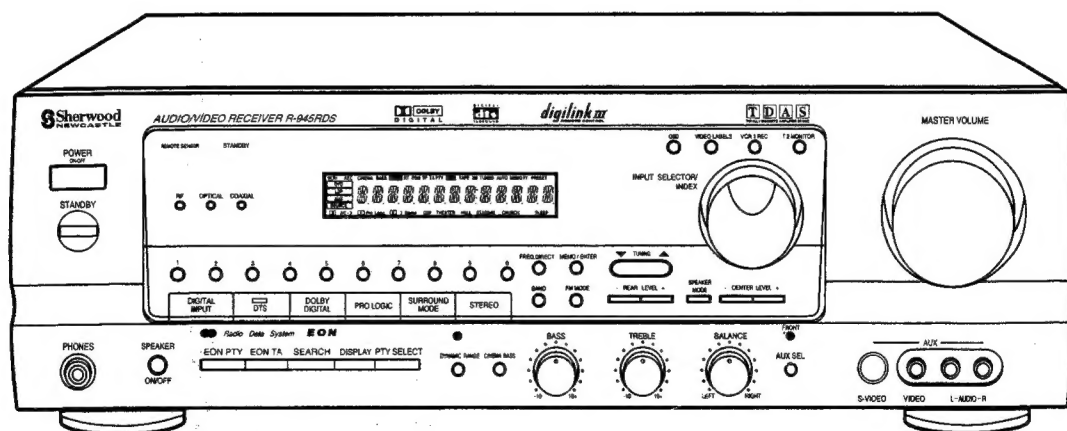
# OPERATING INSTRUCTIONS

MODE D'EMPLOI / BEDIENUNGSANLEITUNG / ISTRUZIONI PER L'USO / MANUAL DE INSTRUCCIONES

**Sherwood**  
NEWCASTLE



SHER -00430



## R-945/R-945RDS

AUDIO/VIDEO RECEIVER



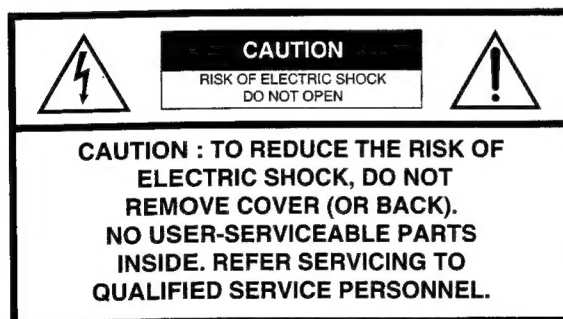
# Introduction

## UNPACKING AND INSTALLATION

### ***Congratulations on Your Purchase!***

Your new high fidelity receiver is designed to deliver maximum enjoyment and years of trouble free service. Please take a few moments to read this manual thoroughly. It will explain the features and operation of your unit and help ensure a trouble free installation. Please unpack your unit carefully. We recommend that you save the carton and packing material. They will be helpful if you ever need to move your unit and may be required if you ever need to return it for service. Your unit is designed to be placed in a horizontal position and it is important to allow at least two inches of space behind your unit for adequate ventilation and cabling convenience.

To avoid damage, never place the unit near radiators, in front of heating vents, in direct sunlight, or in excessively humid or dusty locations. Connect your complementary components as illustrated in the following section.



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

### **WARNING**

To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

**Caution : Do not block ventilation openings or stack other equipment on the top.**

### **FOR U.S.A.**

■ **Note to CATV System Installer:** This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

### ■ **FCC INFORMATION**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**CAUTION:** Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

### **Caution regarding placement (Except for U.S.A and Canada)**

To maintain proper ventilation, be sure to leave aspace around th unit (from the largest outer dimensions including projections) equal to, or greater than, shown below.

Left and right panels: 10 cm  
Rear panel: 10 cm  
Top panel: 20 cm



# **READ THIS BEFORE OPERATING YOUR UNIT**

**FOR U.S.A. AND CANADA .....120 V**

## **FOR YOUR SAFETY**

Units shipped to the U.S.A. and Canada are designed for operation on 120 V AC only.

Safety precaution with use of a polarized AC plug. However, some products may be supplied with a nonpolarized plug.

**CAUTION :** *To prevent electric shock, match wide blade of plug to wide slot, fully insert.*

**ATTENTION :** *Pour éviter les choc electriques, introduire la lame la plug large de la borne correspondante de la prise et pousse jusqu'au fond.*

**FOR EUROPE AND AUSTRALIA .....230 V/240 V**

## **FOR YOUR SAFETY**

Units shipped to Australia are designed for operation on 240 V AC only.

To ensure safe operation, the three-pin plug supplied must be inserted only into a standard three-pin power point which is effectively earthed through the normal household wiring. Extension cords used with the equipment must be three-core and be correctly wired to provide connection to earth. Improper extension cords are a major cause of fatalities. The fact that the equipment operates satisfactorily does not imply that the power point is earthed and that the installation is completely safe. For your safety, if in any doubt about the effective earthing of the power point, consult a qualified electrician.

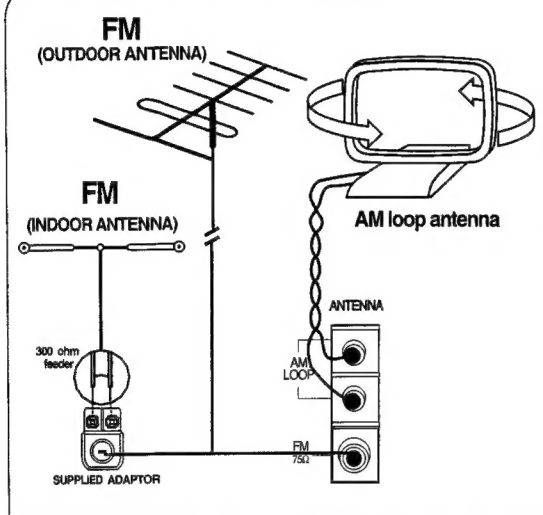
### **PAN-EUROPEAN UNIFIED VOLTAGE**

All units are suitable for use on supplies 230-240 V AC.

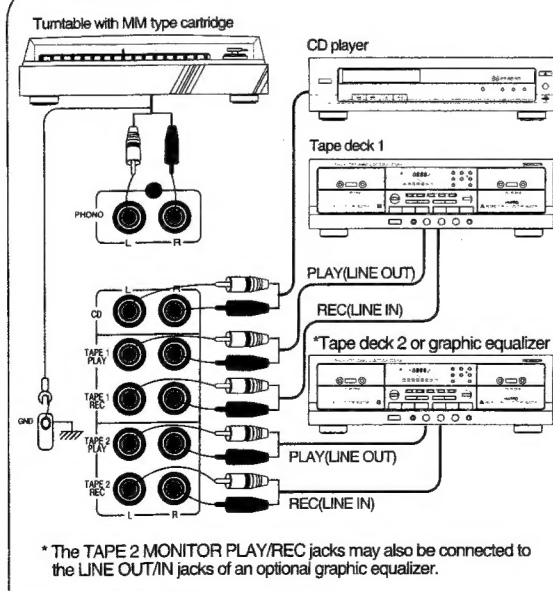
# System Connections

- Do not connect the receiver to the wall AC outlet when plugging and unplugging connection cords.
- Be sure to connect the white RCA pin cords to the L (left) and the red RCA pin cords to the R (right) jacks when making connections.
- Change the position of the FM indoor antenna until you get the best reception of your favorite FM stations.
- A 75  $\Omega$  outdoor FM antenna may be used to further improve the reception.  
Disconnect the indoor antenna before replacing it with the outdoor one.
- Place the AM loop antenna as far as possible from the receiver, TV set, speaker cords and the AC input cord and set it to a direction for the best reception.
- If the reception is poor with the AM loop antenna, an AM outdoor antenna can be used in place of the AM loop antenna.  
Caution : When listening to AM broadcasts in a surround mode without an AM antenna, digital noise can be heard.  
Should this happen, connect an AM antenna.
- Make connections firmly and correctly. If not, it can cause loss of sound, noise or damage to the receiver.
- If the electricity fails or the AC input cord is left unplugged for about 2 weeks, the memorized contents will be cleared.  
Should this happen, memorize them again.

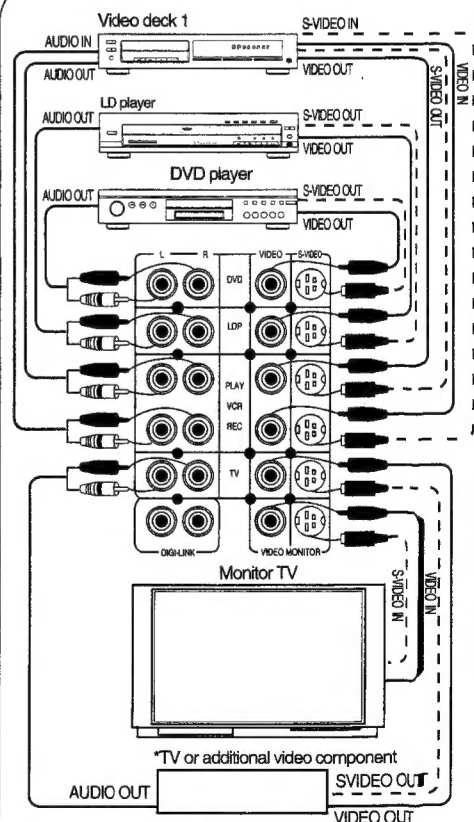
## CONNECTING ANTENNAS



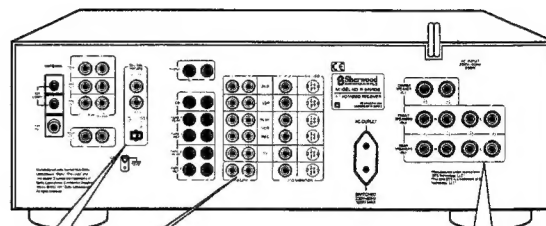
## CONNECTING AUDIO COMPONENTS



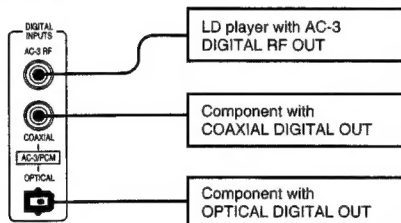
## CONNECTING VIDEO COMPONENTS



- \* The TV jacks may also be connected to an additional video component such as a cable TV tuner, a video deck or satellite system.
- \* Use the S-VIDEO jacks to make connections to video components with S-VIDEO IN/OUT jacks. A signal input into the S-VIDEO jack will be output in only the S-VIDEO jack and a signal input into the normal VIDEO jack will be output in only the normal VIDEO jack.

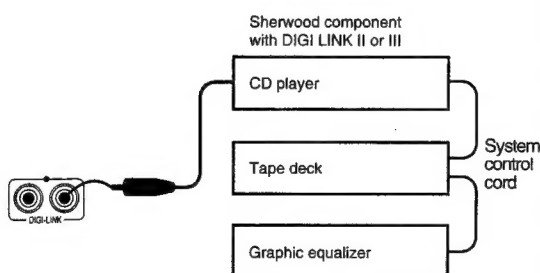


### ■ CONNECTING DIGITAL INPUTS



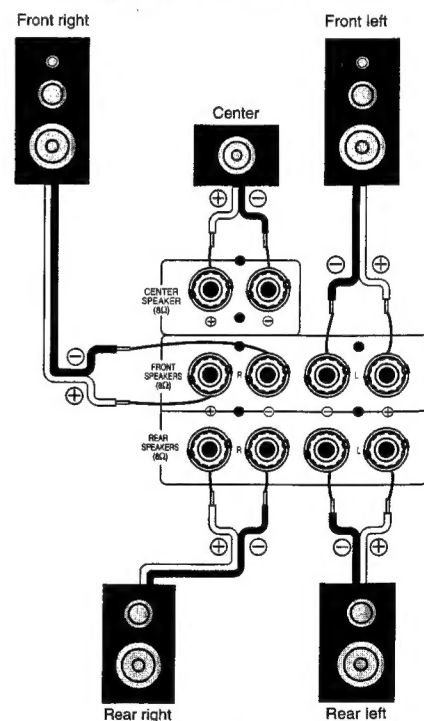
- A digital input should be connected to the components such as LD player or DVD, etc. capable of outputting DTS Digital Surround, Dolby Digital(AC-3), PCM or RF format digital signals.
- For details, refer to the operating instructions of the component connected.
- When making the COAXIAL DIGITAL connection, be sure to use a 75Ω COAXIAL cord, not a conventional AUDIO cord.

### ■ CONNECTING SYSTEM CONTROL



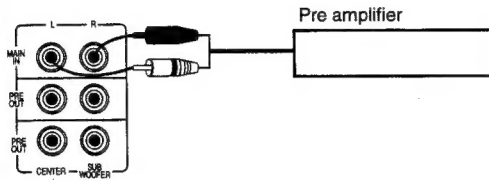
- Connect this jack to the DIGI LINK jack of the external Sherwood component that uses the DIGI LINK II or III remote control system.

### ■ CONNECTING SPEAKERS



- Never short circuit the + and - speaker cords.
- Be sure to connect speakers firmly and correctly according to the channel (left and right) and the polarity (+ and -).
- Be sure to use the speakers with the impedance of over 8 Ω.
- Always connect both rear speakers.
- For installing the speakers, refer to "Speaker placement" on page 15.

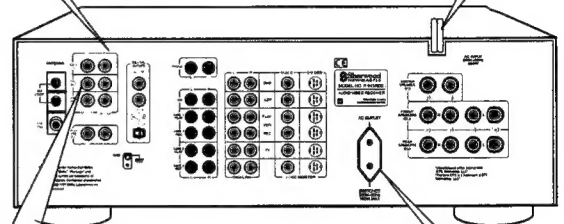
### ■ MAIN IN connections



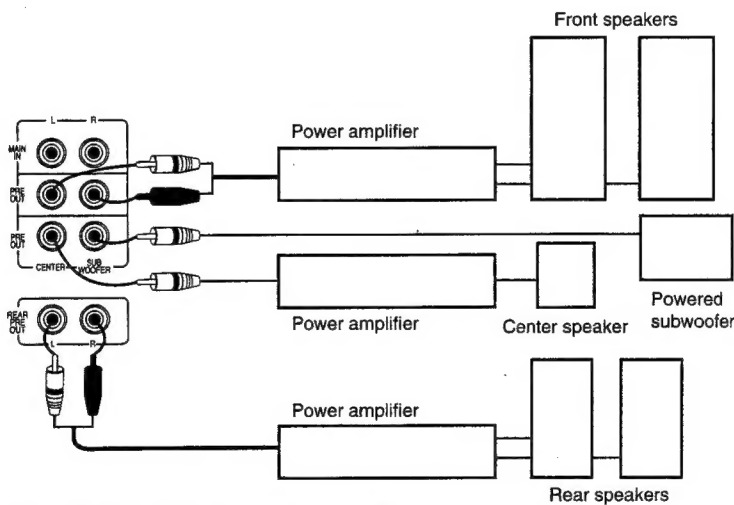
- When a separate pre amplifier is used for front channels, connect these jacks to the pre amplifier and connect the front speakers to this receiver.

### ■ AC INPUT CORD

Plug this cord into a wall AC outlet



### ■ PRE OUT connections



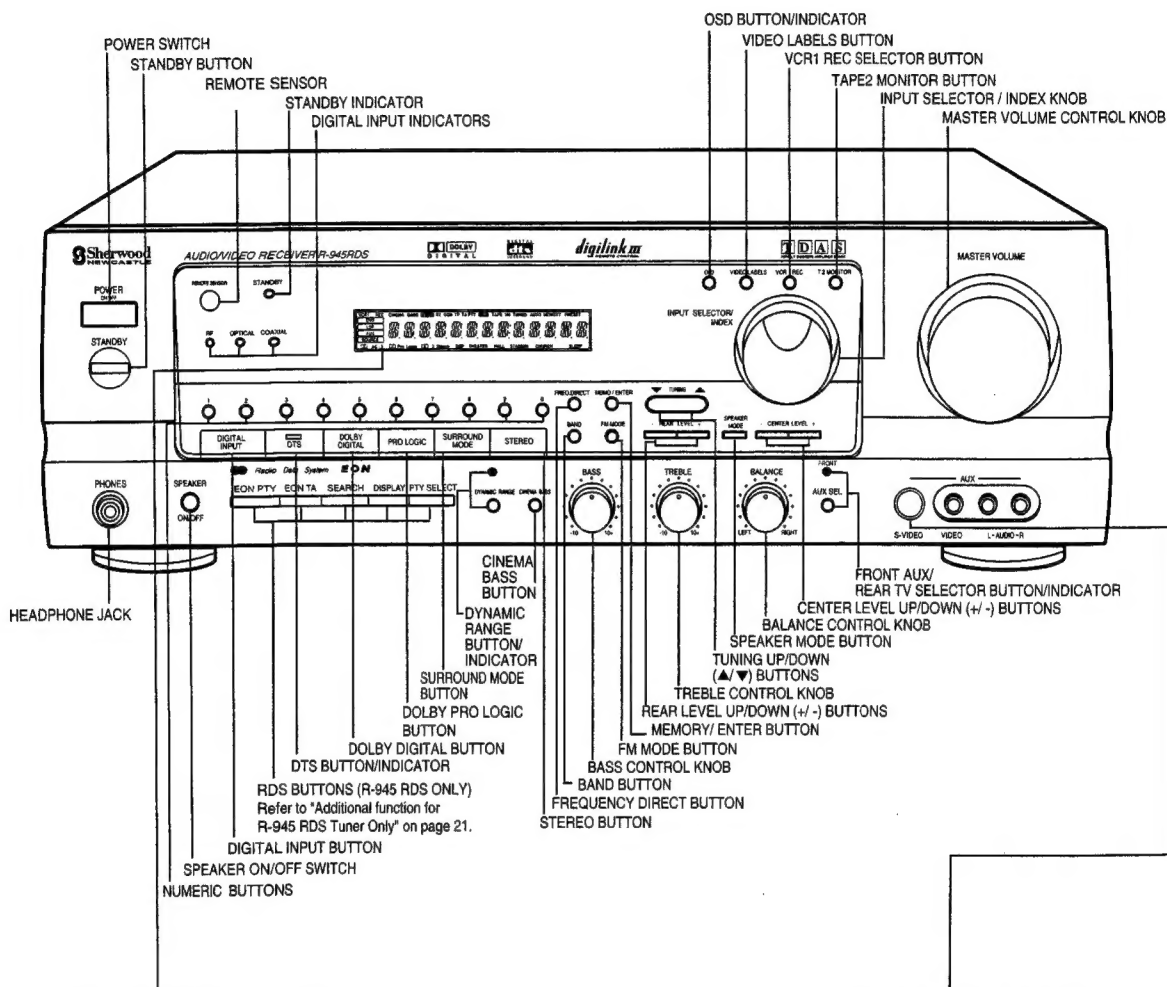
- Use these jacks when adding additional amplifiers.
- Connect the PRE OUT jacks to the powered speakers or the power amplifiers connected to speakers respectively.
- To emphasize the deep bass sounds, connect a powered subwoofer.
- When you do not use the front MAIN IN and PRE OUT jacks, always connect these jacks with the supplied jumper plugs.

### ■ SWITCHED AC OUTLETS

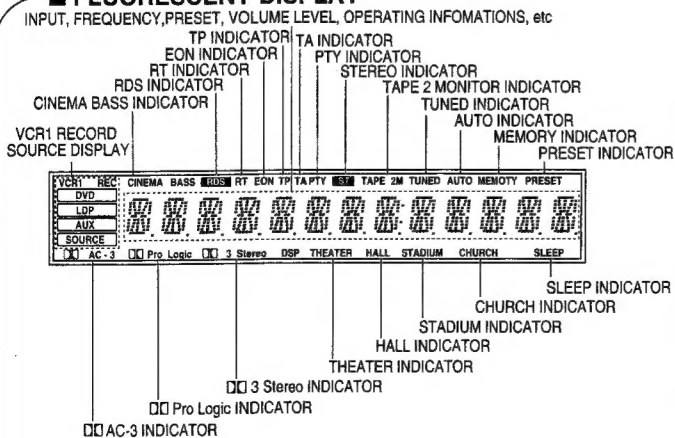
- These outlets are switched on and off by the STANDBY button on the front panel or the POWER button on the remote control. (Maximum total capacity is 100W)

[Standby mode – switched AC outlet off]  
[Power on mode – switched AC outlet on]

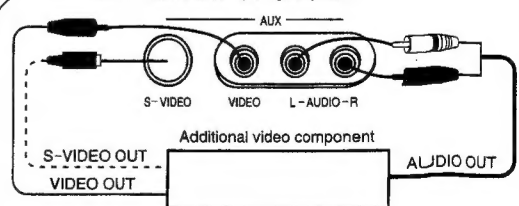
## Front Panel Controls



### ■ FLUORESCENT DISPLAY



### ■ Front AUX INPUT JACKS



- The front Aux jacks may be also connected to an additional video component such as a camcorder, a video deck or a video game player, etc.
- Use the S-VIDEO jack to make connection to video component with the S-VIDEO out jack. A signal input into the S-VIDEO jack will be output in only the S-VIDEO jack and a signal input into the normal VIDEO jack will be output in only the normal VIDEO jack.

# Universal Remote Control

Notes: For enhanced Universal Remote Programming instructions and product identification codes, please refer to the operating manual inclosed with this Universal Remote Control.

This remote control has 3 operating modes as follows;

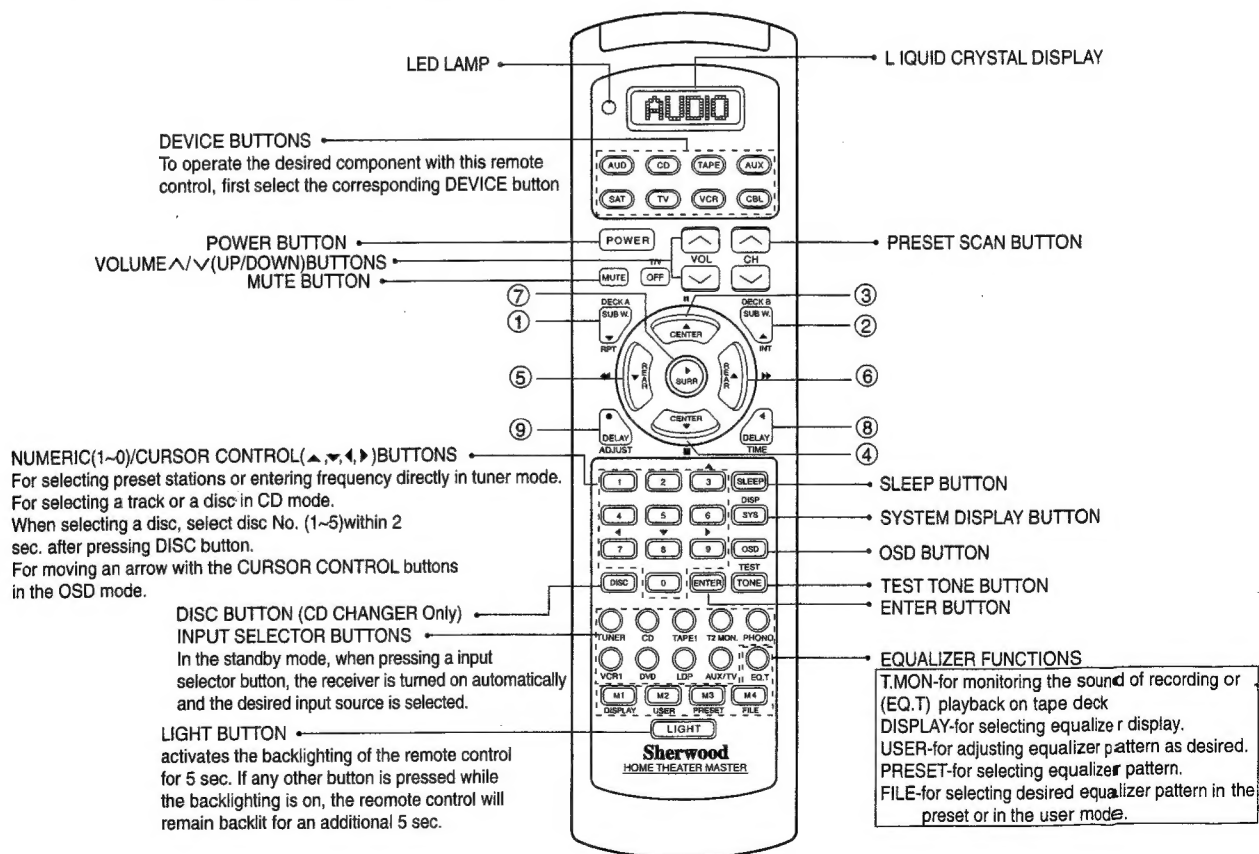
- OSD (On Screen Display) mode: Allows you to look at information about basic operation of this receiver on your monitor TV and to operate this receiver by moving an arrow that appears on the screen of your monitor TV.
- Sherwood mode: Allows you to operate this receiver, and other Sherwood components like cassette decks, CD players and equalizers, etc. (To operate other Sherwood components, you should make the DIGI LINK connections between them)
- Non-Sherwood mode: Allows you to operate the non-Sherwood audio and video components.

Notes:

- The set-up code for each component should be entered before operation.  
For set-up codes (product identification codes), please refer to "Set-Up Code Tables" in the operating manual of this remote control.
- Some operation buttons have different functions according to each operation mode.
- Be sure to set the remote control to the correct mode before operation.













## DIGI LINK SYSTEM REMOTE CONTROLS

- This section explains the basic functions for Sherwood or OSD mode. For non-Sherwood mode, refer to the operating manual of this remote control.
- All Sherwood components bearing the DIGI LINK (II or III) logo can be used with this remote control.
- For system remote control operation, first make the DIGI LINK connections between Sherwood components.
- The numbered buttons on the remote control have different functions in different modes. For details, refer to the "FUNCTION TABLE of the NUMBERED BUTTONS" on next page.





■ FUNCTION TABLE of the NUMBERED BUTTONS.

Component control selection buttons		 (for receiver)		
Button symbols				
① 		SUBWOOFER LEVEL DOWN	REPEAT A< · >B	DECK SELECTOR A
② 		SUBWOOFER LEVEL UP	INTRO SCAN	DECK SELECTOR B
③ 		CENTER LEVEL UP	PAUSE	PAUSE
④ 		CENTER LEVEL DOWN	STOP	STOP
⑤ 		REAR LEVEL DOWN	BACKWARD SKIP	REWIND
⑥ 		REAR LEVEL UP	FORWARD SKIP	FAST-FORWARD
⑦ 		SURROUND MODE	PLAY	FORWARD PLAY
⑧ 		DELAY TIME	—	REVERSE PLAY
⑨ 		DELAY ADJUST	—	RECORD

- When using the Sherwood DIGI LINK III components, by pressing PLAY, etc. on CD player or tape deck, **CD** or **TAPE 2 MONITOR** is selected automatically without selecting the input source and then PLAY, etc. starts. In this case, to listen to TAPE 1, switch off the TAPE 2 MONITOR and select the TAPE 1.

Notes:

- Some functions for CD player, tape deck or equalizer may not be available.
- For details about functions, refer to the operating instructions of each component.
- The TV/OFF and the CH ∇ buttons may not be available for this receiver.

# Operations

Note: Before operating this receiver with the supplied remote control, refer to "Universal Remote Control" on page 8 for details about operation.

## LISTENING TO A PROGRAM SOURCE

### Before operation

- Enter the standby mode.



- The STANDBY indicator lights up. This means that the receiver is not disconnected from the AC outlet and a small amount of current is retained to support the memorized contents and operation readiness.
- To switch the power off, push the POWER switch again.
- Then the power is cut off and the STANDBY indicator goes off.

1

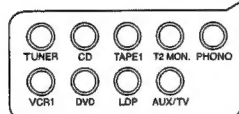
In the standby mode, turn the power on.



or

POWER

or



- Each time the STANDBY button on the receiver or the POWER button on the remote control is pressed, the receiver is turned on to enter the operating mode or off to enter the standby mode.
- In the standby mode, if the INPUT SELECTOR button is pressed on the remote control, the receiver is turned on automatically and the desired input is selected.

2

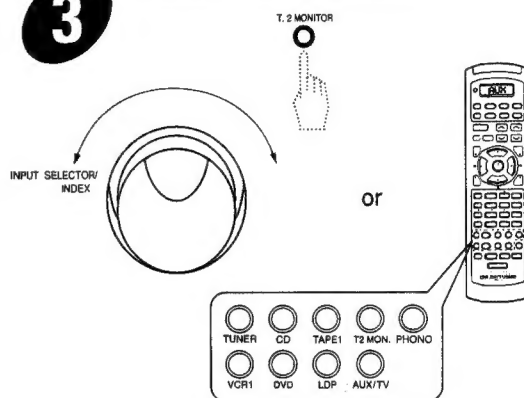
Switch the speakers on.



- Then sound can be heard from the speakers connected to the speaker terminals.
- When using the headphone for private listening, press the SPEAKER switch again to switch the speakers off.

3

Select the desired input source.



- Each time the INPUT SELECTOR/INDEX knob is rotated, the input source changes as follows:

PHONO ↔ TUNER ↔ CD PLAYER ↔ TAPE 1  
(frequency display)

AUX/TV ↔ VCR1 ↔ LD PLAYER ↔ DVD

- When the TAPE 2 MONITOR button is set to on and the "TAPE 2M" indicator lights up, other inputs can not be heard from the speakers. To listen to a input source other than TAPE 2 MONITOR, be sure to set the TAPE 2MONITOR button to off.

### TAPE 2 MONITOR function

You can connect either a tape deck or a graphic equalizer to the receiver's TAPE 2 MONITOR jacks. When listening to the component connected to these jacks, set the TAPE 2 MONITOR button to on. If you connect a 3-head tape deck, you can listen to the sound being recorded during recording, instead of the source sound.

For further details, refer to the operating instructions of the component connected.

### When the AUX/TV is selected as input source

- Select the front AUX or the rear TV.



- If the front AUX is selected, the FRONT AUX indicator lights up.

### When CD, DVD, LDP or AUX/TV is selected as input source

- Select the digital (or the analog) input connected as desired.

DIGITAL INPUT



- Each time this button is pressed, the corresponding input is selected as follows;

- In the DTS mode  
→ OPTICAL → COAXIAL

- In the Dolby Digital(AC-3) mode: Not available for CD → (RF:LDP only) → OPTICAL → COAXIAL

- To play back the laser disc encoded the Dolby Digital(AC-3) format in the Dolby Digital(AC-3) mode, you should select the RF input as the desired digital input.

- In the normal stereo or a surround mode other than the DTS and Dolby Digital(AC-3) modes.

→ OPTICAL → COAXIAL → ANALOG

- When LDP as input source and the normal stereo mode are selected respectively, the RF input should be selected to play back the laser disc encoded the Dolby Digital(AC-3) mode in the 2-CH downmix mode.
- When playing back Dolby Digital(AC-3) program sources in the normal stereo mode, it enters the 2-CH downmix mode automatically, not the normal stereo operation. (For details, refer to "Downmixing into 2 front channels" on page 18.)

#### Notes:

- When the selected optical or coaxial digital input is not connected, the selected DIGITAL INPUT indicator is flickering, meaning no sound. (Refer to "Select the desired surround mode" on page 15.)
- When the DTS or Dolby Digital(AC-3) mode is selected, the component connected to the selected digital input can be heard.

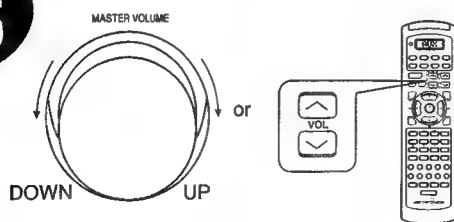
4

Operate the selected component for playback.

- When playing back the program sources with surround sound, refer to "Enjoying surround sound" on page 15.

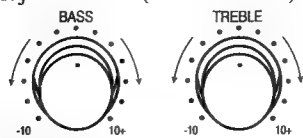
5

Adjust the (overall) volume.



6

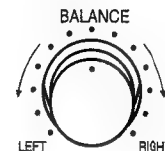
Adjust the tone (bass and treble).



Note : Extreme settings at high volume may damage your speakers.

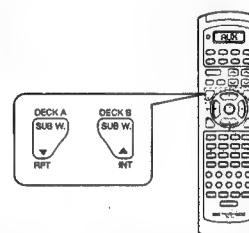
7

Adjust the stereo balance between the left and the right channels.



8

Adjust the subwoofer level.



- It is adjustable only when a powered subwoofer is connected and the subwoofer is set to "YES". (Refer to "Adjusting the speaker settings" on page 16)

9

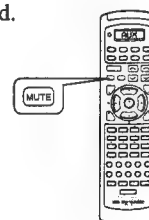
To increase the bass sound.



- Press it again to cancel.

10

To mute the sound.



- "MUTE" will flicker.
- To resume the previous sound level, press it again.

11

To listen with the headphones.



- Ensure that the SPEAKER ON/OFF switch is set to off.

## Adjusting the speaker settings

- Adjusting the settings of the center speaker, rear speakers and subwoofer connected.

**2**

Press the **SPEAKER MODE** button for more than 2 seconds to enter the center speaker mode.



- In **THEATER, HALL, STADIUM, CHURCH** or normal stereo mode, it will enter the subwoofer mode directly.

**3**

Select the desired center speaker mode.



- Each time this button is pressed, the center speaker mode changes and flickers as follows;

**LARGE** : When using a relatively large center speaker.  
**SMALL** : When using a relatively small center speaker.  
**NONE** : When not using a center speaker.

- In the **DTS** mode or the **Dolby 3 Stereo** mode, the **NONE** mode can not be selected. (For details, refer to "SURROUND SOUND" on page 14.)

**4**

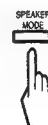
Memorize the desired center speaker mode while it flickers.



- The desired center speaker mode is memorized and then it enters the rear speaker mode in the **Dolby Digital(AC-3)** mode.
- In normal stereo mode and other surround modes except for **Dolby Digital(AC-3)** mode, it enters the subwoofer mode directly.
- If the center speaker display goes off, repeat again from the above step 2.

**5**

Select the desired rear speaker mode.



- Each time this button is pressed, the rear speaker mode changes and flickers as follows;

**YES** : When using the rear speakers.  
**NO** : When not using the rear speakers.

**6**

Memorize the desired rear speaker mode while it flickers.



- The desired rear speaker mode is memorized and then it enters the subwoofer mode.
- If the rear speaker display goes off, repeat again from the above step 2.

**7**

Select the desired subwoofer mode.



- Each time this button is pressed, the subwoofer mode changes and flickers as follows;

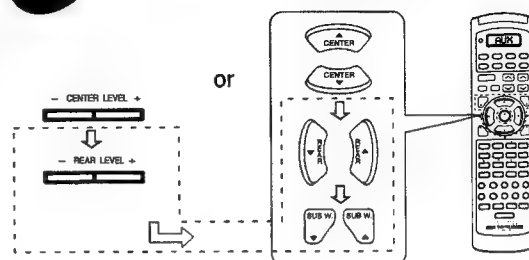
**YES** : When using a subwoofer.  
**NO** : When not using a subwoofer.

- 8** Memorize the desired subwoofer mode while it flickers.



- If the subwoofer display goes off, repeat again from the above step 2.

- 10** Adjust the volume levels of the speakers until they all sound equally loud.



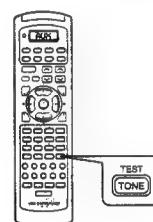
- The rear L and R volume levels are adjusted respectively during the test tone function and all together while enjoying surround sounds.

### Checking the speaker setting



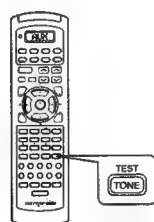
- Each time this button is pressed briefly, the setting of the center speaker, the rear speakers or the subwoofer is displayed.

- 11** Cancel the test tone function.



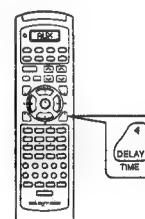
### In DTS, Dolby Digital(AC-3), Dolby Pro Logic or Dolby 3 Stereo mode

- 9** Press the TEST TONE button to adjust the volume level of each speaker.



- Test tone will be heard from each speaker for 2 seconds each as follows;  
→ FRONT L→ CENTER→FRONT R→REAR R→REAR L→SUB
- The test tone will be heard from the subwoofer only when subwoofer is set to "YES" in the DTS mode and the Dolby Digital(AC-3) mode.
- Test tone is not heard from rear speakers in Dolby 3 Stereo mode.
- Test tone is not heard from the speaker of which the setting is adjusted to the NONE or the NO mode.

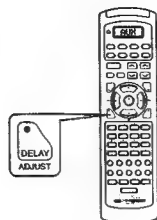
- 12** Check the delay time to be adjusted.



- The delay time will be displayed for 5 seconds.
- In Dolby Digital(AC-3) mode, the corresponding delay time will be flickering.
- The center delay time can be adjustable only in Dolby Digital(AC-3) mode.
- The rear delay time can be adjustable only in Dolby Digital(AC-3) and Dolby Pro Logic modes.

**13**

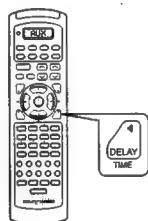
Adjust the delay time.



- Each time this button is pressed, the delay time changes in regular intervals.
- If the delay time disappears, start from the step 12 again.

**14**

Memorize the delay time.



- In Dolby Pro Logic mode, the rear delay time can be memorized without pressing the DELAY TIME button.

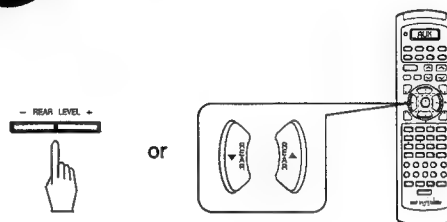
**15**

In Dolby Digital(AC-3) mode, repeat the above steps 13 and 14 to adjust the rear delay time.

## In THEATER, HALL, STADIUM or CHURCH Mode

**9**

Adjust the volume level of the rear speakers relative to that of the front speakers.



## Downmixing into 2 front channels

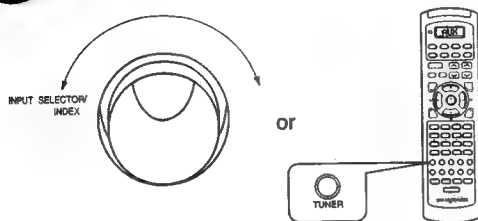
- This function can be operated only when playing back the Dolby Digital(AC-3) program sources.
- During playback in the Dolby Digital(AC-3) mode, press the STEREO button.



- “**AC-3**” and “**ST**” indicators light up, meaning it enters the 2-CH downmix mode, and then the 5 discrete channels (front L, center, front R, rear L, and rear R) are mixed down to 2 front channels.
- When playing back the Dolby Digital(AC-3) program sources in the normal stereo mode, it enters the 2-CH downmix mode automatically.
- When the settings of the center and rear speakers are adjusted to the NONE and NO modes respectively in the Dolby Digital(AC-3) mode, if playing back the Dolby Digital (AC-3) program sources, it can also enter the 2-CH downmix mode.
- When playback is stopped or interrupted, etc., the 2-CH downmix mode is not canceled but “**AC-3**” and “**ST**” indicators goes off.
- To cancel the 2-CH downmix mode, select the desired surround mode.

# LISTENING TO RADIO BROADCASTS

**1** Select the tuner.



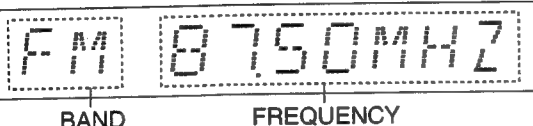
## Manual tuning

- Manual tuning is useful when you already know the frequency of the desired transmitter.

**3** Press TUNING ▼ or ▲ repeatedly until the right frequency has been reached.



**2** Select the desired band.



BAND

FREQUENCY

- Each time this button is pressed, the band is changed to FM or AM.
- When pressing the BAND button without selecting the TUNER, the tuner will be selected automatically.

## Frequency direct tuning

**3** Enter the frequency direct tuning mode.



## Auto tuning

**3** Press TUNING ▼ or ▲ for more than 0.5 second.



- Then AUTO appears on the display. The tuner will now search until a station of sufficient strength has been found. The display shows the tuned frequency and "TUNED".
- If the station found is not the desired one, simply repeat this operation.
- Weak stations are skipped during auto tuning.

**4** Enter the frequency within 7 second for each digit.

Examples)

- FM 89.15MHz : ○-○-○-○
- FM 100.15 MHz : ○-○-○-○
- AM 576 kHz : ○-○-○
- AM 1611 kHz : ○-○-○-○
- In FM band, If "1" is pressed on the first digit, "10" is entered.
- With the numeric button on the remote control, you can also enter the frequency.
- In each digit, if it elapses 7 seconds, press the FREQUENCY DIRECT button again to enter the frequency.

### Presetting radio stations

- You can store up to 30 preferred stations in the memory.

**3**

Tune in the desired station with auto or manual tuning, etc.

**4**

Press the MEMORY/ENTER button.



- "MEMORY" is flickering for 5 seconds.

**5**

Enter a preset number (1~30).

Examples)

- For "3": or
- For "15": or

- The station has now been stored in the memory
- A stored frequency is erased from the memory by storing another frequency in its place.
- If "MEMORY" goes off, press the MEMORY/ENTER button again to enter a preset number.

### Tuning to preset stations

**2**

Press the desired preset number.

Example)

- For "3": or
- For "15": or

- When pressing the numeric buttons on the front panel without selecting the TUNER, the tuner will be selected automatically and the preset station will be tuned in.

### Listening to FM stereo broadcasts

- While listening to FM broadcasts.



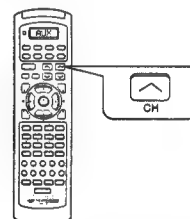
- Each time this button is pressed, the FM mode changes as follows;

- Stereo mode : "ST" lights up
- Mono mode : "ST" goes off

- When FM stereo broadcasts are poor because of weak broadcast signals, select the FM mono mode to reduce the noise, then FM broadcasts are reproduced in monaural sound

### Scanning preset stations in sequence

**1**



- The receiver will start scanning the stations in the preset sequence and each station is received for 5 seconds.

**2**

At the desired station, press this button again to stop scanning.

### ■ MEMORY BACKUP FUNCTION

The following items, set before the receiver is turned off, are memorized.

- INPUT SELECTOR settings
- VCR 1 REC SELECTOR settings
- Surround mode settings
- Preset stations
- Video labels, etc.

Note: If the electricity fails or the AC input cord is disconnected for about 2 weeks, they are all cleared. So you should memorize them again.



## Additional Function for R-945 RDS Tuner Only

### LISTENING TO RDS BROADCASTS (FM only)

RDS(Radio Data System) is method for sending information signals together with the transmitter signals. Your tuner is capable of translating these signals and putting the information on the display. These codes contain the following informations. Program service name(PS), A list of Program Types(PTY), Traffic Announcement(TA), Clock Time(CT), Radio Text(RT).

#### RDS search

- Use this function to automatically search and receive the stations offering RDS services.

1

In the FM mode, select the RDS search mode.



- Each time this button is pressed, the search mode changes as follows;

RDS SEARCH→TP SEARCH→PTY SEARCH→OFF

2

While displaying "RDS SEARCH"



- The tuner automatically searches stations offering RDS services and the station name is displayed.
- If the station found is not the desired one, press the TUNING-or+again while the RDS indicator is flickering.
- If no other RDS station is found, "NO RDS" is displayed.
- When "RDS SEARCH" is not displayed, repeat again from the above step 1.

#### TP search

- Use this function to automatically search and receive the stations broadcasting the traffic program.

1

In the FM mode, select the TP search mode.



- "TP SEARCH" is displayed.

2

While displaying "TP SEARCH".



- The tuner automatically searches for stations broadcasting the traffic program.
- "NO TRAFFIC" is displayed if the signal is too weak or there are no stations broadcasting the traffic program.
- When "TP SEARCH" is not displayed repeat again from the above step 1.

#### PTY search

- Use this function to automatically search and receive the stations broadcasting the desired program type.

1

In the FM mode, select the PTY search mode.



- "PTY SEARCH" is displayed.

2

While displaying "PTY SEARCH". select the desired program type.



- Each time this button is pressed, one of 17 different types of programs is selected. (NEWS, AFFAIRS, INFORMATION, SPORT, EDUCATION, DRAMA, CULTURE, SCIENCE, VARIED, POP MUSIC, ROCK MUSIC, M.O.R. MUSIC, LIGHT MUSIC, SERIOUS MUSIC, OTHER MUSIC, ALARM, UNDEFINED)
- When "PTY SEARCH" is not displayed, repeat again from the above step 1.

3



- The tuner automatically searches a station offering PTY services.
- In no station is found, "NO PROGRAM" is displayed.

### EON PTY (EON:Enhanced Other Networks information)

- Use this function to automatically search and receive the desired program type while listening to a RDS station.



- Program type is displayed and the PTY indicator is flickering.

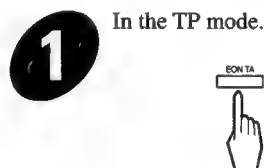
**2** While the PTY indicator is flickering, select the desired program type.



- If one of the preset stations is broadcasting the selected program type, it will be tuned in while listening to a RDS station.
- If the station stops broadcasting the selected program type, the tuner will find other stations repeatedly.
- If no station is found, the previous RDS station will be tuned in.
- When the PTY indicator goes off, repeat again from the above step 1.
- Press the EON PTY button to cancel the EON PTY mode.

### EON TA

- Use this function to automatically search and receive the traffic announcement while listening to traffic program.

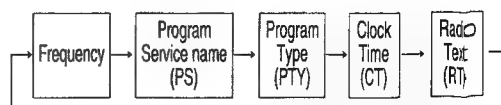


- Traffic program is displayed and the TA indicator lights up.
- If the preset station broadcasting traffic announcement is found, it will be tuned in while listening to traffic program.
- If the station stops broadcasting traffic announcement, the tuner will find other stations repeatedly.
- If no station is found, the previous traffic program station will be tuned in.
- Press the EON TA button to cancel the EON TA mode.

### DISPLAY



- Each time this button is pressed, the display mode changes as follows;



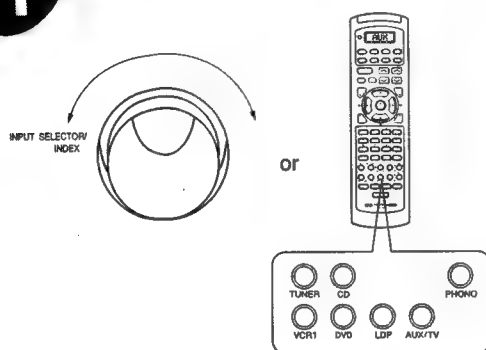
- If the signals are too weak or no RDS service is available, "NO NAME DATA", "NO PTY DATA", "NO TIME DATA" or "NO TEXT DATA" will be displayed.

## AUDIO RECORDING

- The digital signals from the optical, coaxial or RF digital input can be heard but cannot be recorded.

### Recording with TAPE 1

- 1 Select the desired input as recording source except for TAPE1 and TAPE 2 MONITOR.



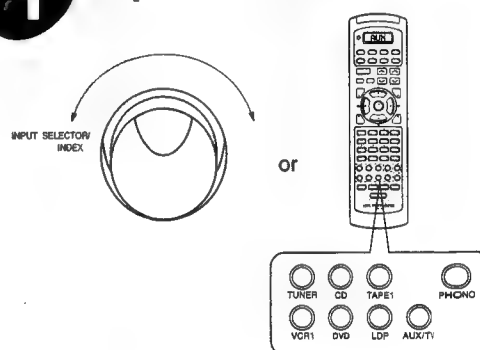
- Be sure that the TAPE 2 MONITOR indicator goes off.

- 2 Start recording on the tape deck connected to TAPE 1.

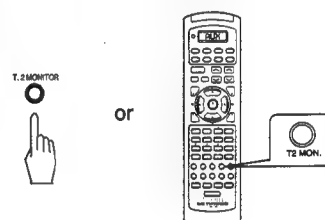
- 3 Start play on the desired input.

### Recording with TAPE 2 MONITOR

- 1 Select the desired input as recording source except for TAPE 2 MONITOR.



- 2 Set the TAPE 2 MONITOR button to on.



- 3 Start recording on the tape deck connected to TAPE 2 MONITOR.

- 4 Start play on the desired input.

- When the TAPE 1 is selected as recording source, dubbing will start from TAPE 1 to TAPE 2 MONITOR.
- It is not possible to dub from TAPE 2 MONITOR to TAPE 1.
- For tape 2 monitor function, refer to "TAPE 2 MONITOR function" on page 12.

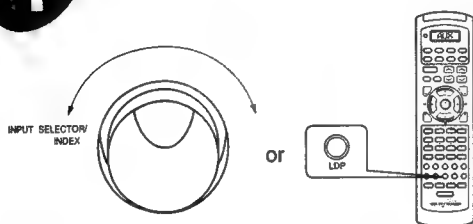
## RECORDING WITH VCR1

- The digital signals from the optical, coaxial or RF digital input can be heard but cannot be recorded.

### Dubbing from video components to VCR 1

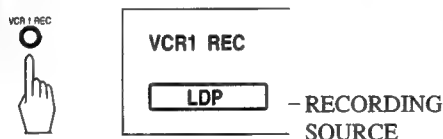
Example) When dubbing from LD player to VCR 1

- 1 Select LDP as program source.



PROGRAM SOURCE being enjoyed.

- 2 Select LDP as recording source.



- Each time this button is pressed, the recording source changes as follows;

→ DVD → LDP → AUX → SOURCE →

- 3 Start recording on the VCR 1.

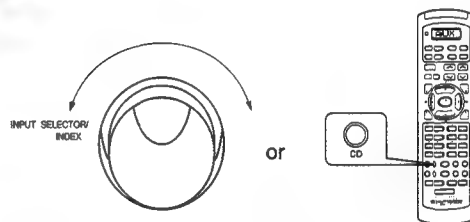
- 4 Start play on the LDP.

- The audio and video signals from LDP will be dubbed onto the tape in VCR 1 and you can enjoy LDP on the TV set and from the speakers.

### Listening to other audio inputs during dubbing

Example) When listening to CD during dubbing from LDP to VCR 1.

- 1 Select CD as the program source being enjoyed.



- 2 Select LDP as recording source.



- 3 Start recording on the VCR 1.

- 4 Start play on the LDP.

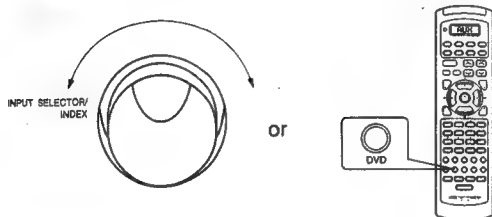
- 5 Start play on the CDP.

- The audio and video signals from LDP will be dubbed onto the tape in VCR 1 and you can listen to CD.

## Enjoying other video inputs during dubbing

Example) When viewing DVD on the TV set and hearing its sound from the speakers during dubbing from LDP to VCR 1.

- 1 Select DVD as the program source.



- 2 Select LDP as recording source.



- 3 Start recording on the VCR 1.

- 4 Start play on the LDP.

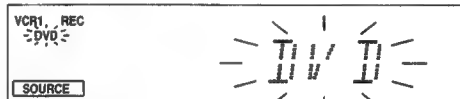
- 5 Start play on the DVD.

- The audio and video signals from LDP will be dubbed onto the tape in VCR 1 and you can enjoy DVD.

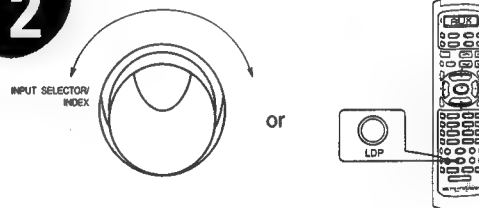
## Dubbing and enjoying the audio and video signals separately

Example) When dubbing and enjoying LD video signal and CD audio signal.

- 1 Select "SOURCE".



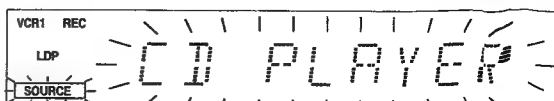
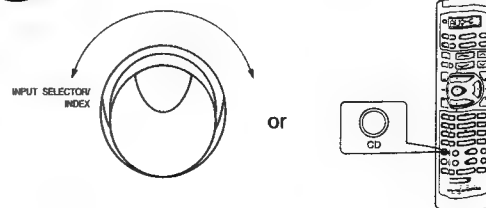
- 2 Select LDP as video source within 5 seconds.

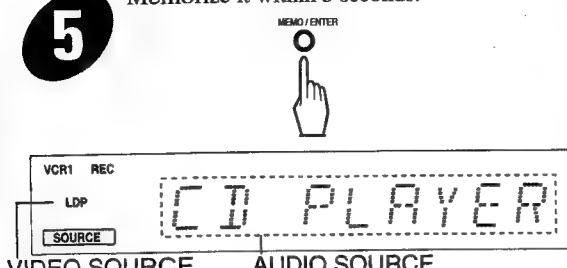


- 3 Memorize it within 5 seconds.



- 4 Select CD as audio source within 5 seconds.



<p><b>5</b> Memorize it within 5 seconds.</p>  <p>• In the above step, if 5 seconds elapses, repeat again from the step 1.</p>	<p><b>6</b> Start recording on the VCR 1.</p> <p><b>7</b> Start play on the LDP.</p> <p><b>8</b> Start play on the CDP.</p> <ul style="list-style-type: none"> <li>• The audio signal from CDP and the video signal from LDP will be dubbed onto the tape in VCR 1 and you can enjoy them on the TV set and from the speakers.</li> </ul>
---	---

## OTHER FUNCTIONS

### Compressing the dynamic range (Dolby Digital (AC-3) mode only)

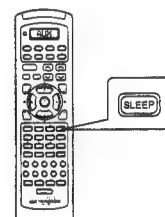
- This function compresses the dynamic range of previously specified parts of the Dolby Digital (AC-3) sound track (with extremely high volume) to minimize the difference in volume between the specified and non-specified parts. This makes it easy to hear all of the sound track when watching movies at night at low levels.



- Then the DYNAMIC RANGE indicator lights up.
- Press again to cancel.
- In some Dolby Digital (AC-3) softwares, this function may not be used.

### Operating the sleep timer

- The sleep timer allows the system to continue to operate for a specified period of time before automatically shutting off.
- To set the receiver to automatically turn off after the specified period of time.

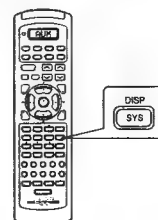


- Each time this button is pressed, the sleep time changes as follows ;

→ 10 → 20 → 30 → 60 → 90 → OFF  
Unit : Minutes

- When the sleep time is selected, all display panels of Sherwood components connected by the DIGI LINK III are dimly lit.

### Checking the brightness of the fluorescent displays



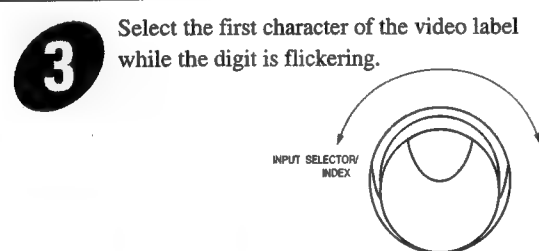
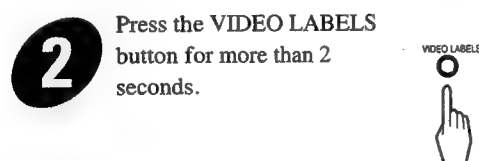
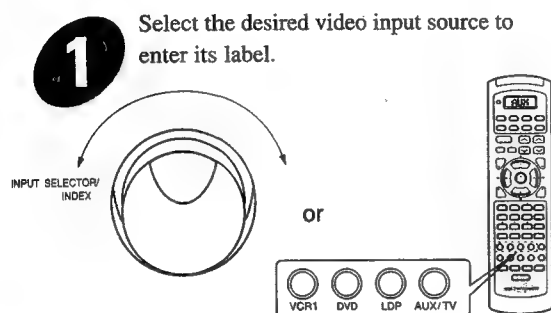
- Each time this button is pressed, the brightness of all fluorescent displays of Sherwood components connected by the DIGI LINK III changes together as follows;

→ ON → dim → OFF

- In the display OFF mode, when any button is pressed, the receiver switches to the display ON mode.

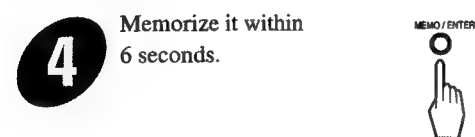
## Entering video labels

- This function can be operated only on video input sources such as DVD, LDP, VCR 1 and AUX/TV.

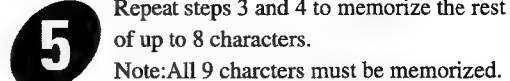


- Each time the INPUT SELECTOR/INDEX knob is rotated, the characters changes as follows ;

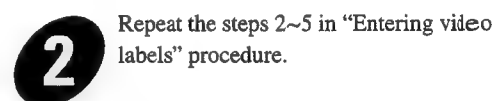
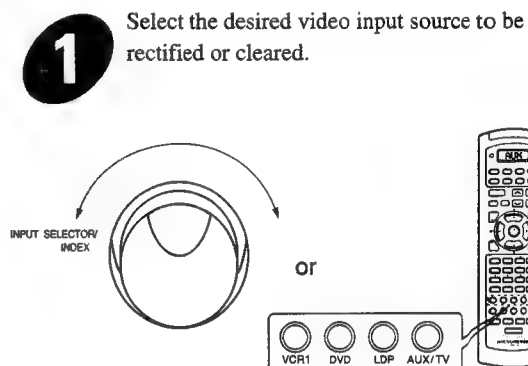
26 Capital Letters : A B C D E F G H I J K L M N O P  
Q R S T U V W X Y Z  
10 Arabic Numerals : 1 2 3 4 5 6 7 8 9 0  
9 Special Marks : ' < > \* + , - / \



- If the MEMORY/ENTER button is pressed for more than 2 seconds on the character, a dot( · ) will appear by the character.
- If the MEMORY/ENTER button is pressed without selecting the desired character, the digit will be blank.
- If 6 seconds elapses, repeat again from the step 2.



## Rectifying or clearing a video label



- To clear a video label, make a blank on each digit, then the video label is cleared and its factory video input source will be displayed.

## Using the OSD

This receiver incorporates an OSD (On screen display) function to provide information about basic operation of this receiver and to simplify the set-up procedures.

The OSD function uses a monitor TV connected to this receiver as a display and has two kinds of display modes such as current status display and menu screen.

Notes:

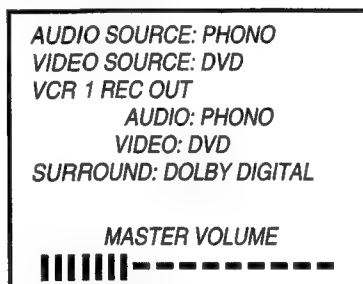
- When a monitor TV is connected to this receiver with the S-VIDEO cord, the OSD function is not available.
- If any on screen display is shown on the monitor TV while recording with VCR, the on screen display is not recorded.
- If the OSD button is pressed for more than 3 seconds, the present color system is shown on the fluorescent display.
- If it is different from yours, press the OSD button briefly to change to the PAL color system and the MEMORY/ENTER button to memorize.

### CURRENT STATUS DISPLAY

This mode shows the basic set-ups and the status during the operation of this receiver. The following items will be shown corresponding to each operation mode.

- The on screen display will automatically disappear in 3 sec. for power on or 10 sec. for other operations.

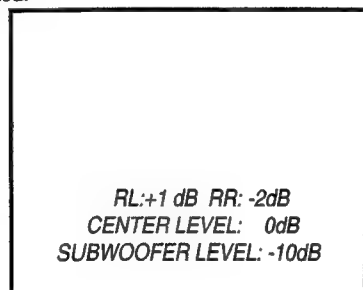
- When the power of this receiver is turned on or the OSD button is pressed.



Basic set-up display

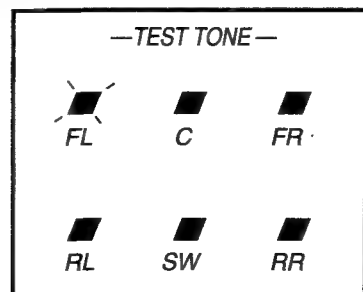
- When the OSD button is pressed, the OSD indicator on the button lights up.

- When the surround (rear, center, subwoofer) levels are adjusted.



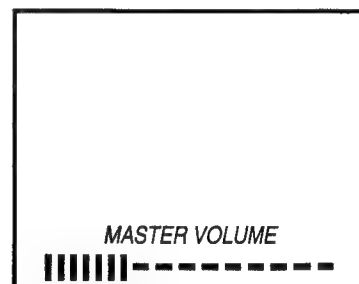
Surround level display

- When the TEST TONE button on the remote control is pressed.



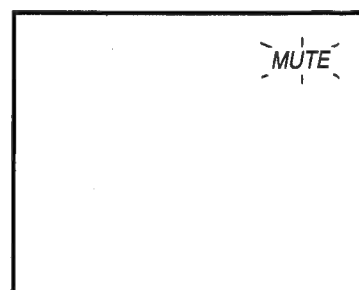
Test tone display

- When the (overall) volume is adjusted



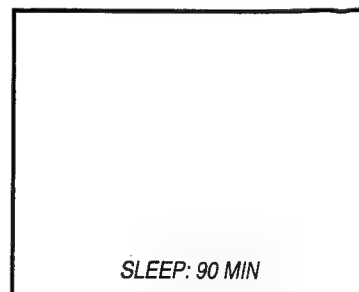
Volume display

- When the MUTE button on the remote control is pressed.



Mute display

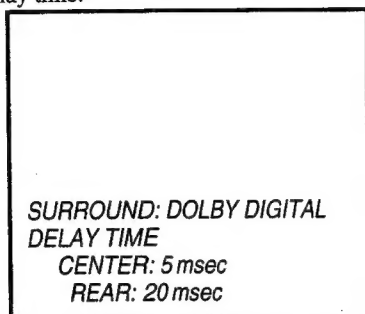
- When the SLEEP button on the remote control is pressed.



Sleep display



- When selecting the desired surround mode or adjusting the delay time.



Surround mode and delay time display

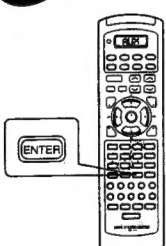
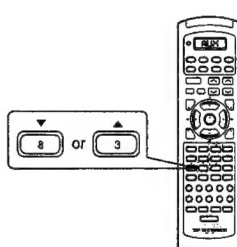
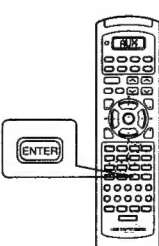
- When selecting the desired input source.



Input source display

## MENU SCREEN

- This mode is used to set the input selector, the VCR 1 REC selector, the surround mode, the speaker mode and the test tone. The menu screen operation is performed moving an arrow with the CURSOR control (▲, ▼, ◀, ▶) buttons on the remote control.

<p><b>1</b> Turn the menu screen on</p>  <div data-bbox="498 1176 854 1489"> <p>— MAIN MENU —</p> <p>→ INPUT SELECTOR VCR1 REC SELECTOR</p> <p>SURROUND MODE SPEAKER MODE TEST TONE</p> <p>MENU OFF</p> </div>	<p><b>2</b> Select the desired menu using the CURSOR UP(▲) or DOWN (▼) button.</p> 
<p><b>3</b> Confirm your selection.</p>  <p>• Then the items of the selected menu displays.</p>	<p>■ When selecting the INPUT SELECTOR</p> <div data-bbox="1019 1612 1372 1937"> <p>— INPUT SELECTOR —</p> <p>→ VIDEO: DVD AUDIO: PHONO</p> <p>TAPE2 MON: OFF</p> <p>GO TO MAIN MENU</p> </div>

■ When selecting the VCR1 REC SELECTOR

— VCR1 REC SELECTOR —

→ VIDEO: DVD  
AUDIO: PHONO

GO TO MAIN MENU

■ When selecting the SURROUND MODE

— SURROUND MODE —

→ SURROUND: DOLBY DIGITAL

DELAY TIME  
CENTER: 1 msec  
REAR: 5 msec

GO TO MAIN MENU

■ When selecting the SPEAKER MODE




— SPEAKER MODE —




→ CENTER: LARGE  
REAR: YES  
SUBWOOFER: OFF

GO TO MAIN MENU

■ When selecting the TEST TONE MODE

— TEST TONE —

→    RR: +1dB  
FL C FR RL: 0dB  
CENTER: 0dB  
SUBW: -5dB

    
RL SW RR

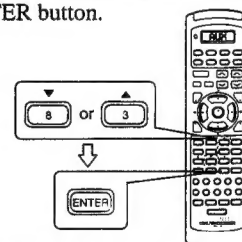
GO TO MAIN MENU

- 4** Select the desired item using the CURSOR UP(▲) or DOWN (▼) button and change the conditions of the items using the CURSOR LEFT (◀) or RIGHT (▶) button.

Notes:

- In the SURROUND MODE, when a delay time shows “□” indication, it can not be adjusted.
- In the TEST TONE mode, you can hear the test tone from each speaker using the CURSOR UP(▲) or DOWN (▼) button as well as the CURSOR LEFT (◀) or RIGHT (▶) button. The test tone from a speaker can not be heard corresponding to the surround mode or the speaker setting.

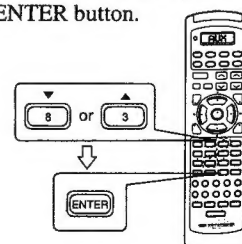
- 5** When all the desired conditions have been made, select the “GO TO MAIN MENU” using the CURSOR UP(▲) or DOWN (▼) button and confirm your selection using the ENTER button.



- Then the MAIN MENU will be displayed.

- 6** Repeat the above steps 2~5 to change the conditions of the items in another menu.

- 7** When all the conditions in the desired menu have been made, select the “MENU OFF” using the CURSOR UP(▲) or DOWN (▼) button and confirm your selection using the ENTER button.



- Then the menu screen will be turned off.

## Troubleshooting Guide

If a fault occurs, run through the table below before taking your receiver for repair.

If the fault persists, attempt to solve it by switching the receiver off and on again. If this fails to resolve the situation, consult your dealer. Under no circumstances should you repair the receiver yourself as this will invalidate the guarantee!

PROBLEM	POSSIBLE CAUSE	REMEDY
No power	<ul style="list-style-type: none"> <li>The AC input cord is disconnected.</li> <li>Poor connection at AC wall outlet or the outlet is inactive.</li> </ul>	<ul style="list-style-type: none"> <li>Connect cord securely.</li> <li>Check the outlet using a lamp or another appliance.</li> </ul>
No sound	<ul style="list-style-type: none"> <li>The speaker cords are disconnected.</li> <li>The master volume is adjusted too low.</li> <li>The MUTE button is pressed to ON.</li> <li>Speakers are not switched on.</li> <li>The digital input is not selected correctly</li> <li>Incorrect selection of input source.</li> <li>Incorrect connections between the components.</li> </ul>	<ul style="list-style-type: none"> <li>Check the speaker connections.</li> <li>Adjust the master volume.</li> <li>Press the MUTE button to cancel the muting effect.</li> <li>Press the SPEAKER ON/OFF switch to ON.</li> <li>Select the digital input correctly.</li> <li>Select the desired input source correctly.</li> <li>Make connections correctly.</li> </ul>
No sound from the rear speakers	<ul style="list-style-type: none"> <li>Surround mode is switched off.</li> <li>Master volume and rear level are too low.</li> <li>Monaural source is used.</li> <li>Dolby 3 Stereo mode is selected.</li> </ul>	<ul style="list-style-type: none"> <li>Select a surround mode.</li> <li>Adjust master volume and rear level.</li> <li>Select a stereo or surround source.</li> <li>Select the desired surround mode.</li> </ul>
No sound from the center speaker	<ul style="list-style-type: none"> <li>DTS, Dolby Digital(AC-3), Dolby Pro Logic or Dolby 3 Stereo mode is not selected.</li> <li>Master volume and center level are too low.</li> </ul>	<ul style="list-style-type: none"> <li>Select the desired surround mode.</li> <li>Adjust master volume and rear level.</li> </ul>
Stations cannot be received	<ul style="list-style-type: none"> <li>No antenna is connected.</li> <li>The desired station frequency is not tuned in.</li> <li>Antenna is in wrong position.</li> </ul>	<ul style="list-style-type: none"> <li>Connect an antenna.</li> <li>Tune in the desired station frequency.</li> <li>Move antenna and retry tuning.</li> </ul>
Preset stations cannot be received	<ul style="list-style-type: none"> <li>An incorrect station frequency has been memorized.</li> <li>The memorized stations are cleared.</li> </ul>	<ul style="list-style-type: none"> <li>Memorize the correct station frequency.</li> <li>Memorize the stations again.</li> </ul>
Poor FM reception	<ul style="list-style-type: none"> <li>No antenna is connected.</li> <li>The antenna is not positioned for the best reception.</li> </ul>	<ul style="list-style-type: none"> <li>Connect an antenna.</li> <li>Change the position of the antenna.</li> </ul>
Continuous hissing noise during FM reception, especially when a stereo broadcast is received.	<ul style="list-style-type: none"> <li>Weak signals.</li> </ul>	<ul style="list-style-type: none"> <li>Change the position of the antenna.</li> <li>Install an outdoor antenna.</li> </ul>
Continuous or intermittent hissing noise during AM reception, especially at night.	<ul style="list-style-type: none"> <li>Noise is caused by motors, fluorescent lamps or lightning, etc.</li> </ul>	<ul style="list-style-type: none"> <li>Keep the receiver away from noise sources.</li> <li>Install an outdoor AM antenna.</li> </ul>
Remote control unit does not operate.	<ul style="list-style-type: none"> <li>Batteries are not loaded or exhausted.</li> <li>The remote sensor is obstructed.</li> </ul>	<ul style="list-style-type: none"> <li>Replace the batteries.</li> <li>Remove the obstacle.</li> </ul>
Other Sherwood components do not react to remote control commands.	<ul style="list-style-type: none"> <li>DIGI LINK connections are not made properly.</li> </ul>	<ul style="list-style-type: none"> <li>Make proper DIGI LINK connections.</li> </ul>
A video label cannot be displayed.	<ul style="list-style-type: none"> <li>Multifunction due to external influences such as static electricity, etc.</li> </ul>	<ul style="list-style-type: none"> <li>Clear it using "To clear a video label" (Refer to "Rectifying or clearing a video label" on page 27)</li> </ul>

## Specifications

### ■ AMPLIFIER SECTION

- Power output, stereo mode, 8  $\Omega$ , THD 0.2%, 20 Hz~20 kHz.....2  $\times$  100 W
- Total harmonic distortion, 8  $\Omega$ , 100 W, 1 kHz.....0.09 %
- Intermodulation distortion
  - 60 Hz: 7 kHz= 4:1 SMPTE, 8  $\Omega$ , 100 W .....0.1 %
- Input sensitivity, 47 k $\Omega$ 
  - Phono .....3.5 mV
  - Line (CD, TAPE, VIDEO) .....200 mV
- Signal to noise ratio, IHF "A" weighted
  - Phono .....72 dB
  - Line (CD, TAPE, VIDEO) .....95 dB
- Frequency response
  - Line (CD, TAPE, VIDEO), 10 Hz~80 kHz.....+ 0 dB, -3 dB
- Output level
  - TAPE REC, 2.2 k $\Omega$  .....200 mV
  - PRE OUT(Front, center, rear, Subwoofer), 1 k $\Omega$ .....950 mV
- Bass/Treble control, 100 Hz/10 kHz..... $\pm$  10 dB
- Surround mode, only channel driven
  - Front power output, 8  $\Omega$ , 1 kHz.....2  $\times$  100 W
  - Center power output, 8  $\Omega$ , 1 kHz.....100 W
  - Rear power output, 8  $\Omega$ , 1 kHz.....2  $\times$  100 W

### ■ DIGITAL AUDIO SECTION

- Sampling frequency .....32,44.1,48 kHz
- Digital input level
  - Coaxial, 75  $\Omega$ .....0.5 Vp-p
  - Optical, 660 nm .....15~21 dBm

### ■ FM TUNER SECTION

- Tuning frequency range.....87.5~108 MHz
- Usable sensitivity, THD 3%, S/N 26 dB .....14.2 dBf
- 46 dB quieting sensitivity, mono/stereo .....20.2/45.2 dBf
- Signal to noise ratio, 65 dBf, mono/stereo .....70/65 dB
- Total harmonic distortion, 65 dBf, 1 kHz, mono/stereo.....0.3/0.5%
- Frequency response, 10 Hz~14 kHz ..... $\pm$  1.5 dB
- Stereo separation, 1 kHz .....42 dB
- Capture ratio.....2 dB
- IF rejection ratio .....80 dB

### ■ AM TUNER SECTION

- Tuning frequency range .....522~1611 kHz
- Usable sensitivity .....500  $\mu$ V/m
- Signal to noise ratio, 80 dB/m.....40 dB
- Selectivity .....25 dB

### ■ GENERAL

- Power supply .....AC 230 V, 50 Hz
- Power consumption.....850 W
- Switched AC outlet.....TOTAL 100 W max.
- Dimensions (W  $\times$  H  $\times$  D).....440  $\times$  140  $\times$  380 mm(17-3/8  $\times$  5-1/2  $\times$  15 inches)
- Weight (Net).....16.3 kg(35.9 lbs)

Note: Design and specifications are subject to change without notice for improvements.